

## **REMARKS/ARGUMENTS**

Claims 1-24 remain pending in the present application, claims 1-20 having been presented in the original application and claims 21-24 having been added by subsequent amendment.

### **Indefiniteness Rejections under 35 U.S.C. §112**

In the March 31, 2003 non-final Office Action, claims 1-24 were rejected under 35 U.S.C. §112 for inadequate disclosure and nonenablement in view of there being no mention in the specification of a limiting oxygen index (LOI) in range formerly recited in the claims, namely, 45% to 65%. The Office Action noted that "only a range of 45.5% to 62% is shown."

Independent claims 1, 19 and 23 have been amended, as suggested in the Office Action, to define the applicants' claimed non-dripping, flame retardant, fluoropolymeric composition as having a limiting oxygen index in the range of 45.5% to 62%, as explicitly disclosed in the specification at, for example, Table 1 on page 10. Applicants submit that the amendments to claims 1, 19 and 23 overcome the section 112 rejections based upon inadequate disclosure and nonenablement.

**Obviousness Rejections under 35 U.S.C. §103(a)**

In the March 31, 2003 non-final Office Action, claims 1-9, 11, 14-20, 23 and 24 were rejected under 35 U.S.C. §103(a) for obviousness in view of the combination of Sibilia U.S. Patent No. 5,310,775 with Beall et al. U.S. Patent No. 5,578,672 and further in view of Kawasumi et al. U.S. Patent No. 4,810,734, Vaia et al. U.S. Patent No. 5,955,535 or Ellsworth U.S. Patent No. 5,962,553. Claims 10, 12 and 13 were rejected under 35 U.S.C. §103(a) for obviousness in view of the combination of Sibilia with Beall and further in view of Kawasumi, Vaia or Ellsworth and even further in view of Kutnyak et al. U.S. Patent No. 4,356,284 or Thulliez et al. U.S. Patent No. 6,054,538. Claims 21 and 22 were rejected under 35 U.S.C. §103(a) for obviousness in view of the combination of Sibilia with Beall and further in view of Kawasumi, Vaia or Ellsworth and even further in view of Day et al. U.S. Patent No. 6,217,197 or Day et al. U.S. Patent No. 6,355,277.

The cited references nowhere disclose or suggest the particularly advantageous range of limiting oxygen index (LOI) values, namely, 45.5% to 62%, now recited for the non-dripping, flame retardant, fluoropolymeric compositions defined in each of the applicants' pending claims. In this regard, Sibilia is relevant only as to its disclosure that electrically insulative

fluoroplastics are improved in their insulative properties by the inclusion of organoclays (see December 21, 2001 Office Action at page 2). Beall is relevant only as to its disclosure that clays that have been intercalated with an in-situ polymerized monomer improve the dispersion of the clay in the monomer and that the resulting nanocomposite product is suitable as an additive in thermoplastics such as fluoroplastics (see December 21, 2001 Office Action at page 2). Kawasumi, Vaia and Ellsworth are relevant only as to their teachings that fluoroplastics including polytetrafluoroethylene (PTFE; trade name Teflon), chlorofluoroethylene and vinylidene fluoride have been employed in connection with nanoclays (see December 21, 2001 Office Action at page 2). Kutnyak and Thulliez are relevant only as to their teachings that chlorinated ethylene polymers and/or polyvinylchloride (PVC) has been employed as an adjunct resin with fluoroplastics in electrically insulative compositions (see December 21, 2001 Office Action at page 3). The Day patents are relevant only as to their disclosure of a blend of polyvinylidene fluoride (PVDF) and melamine octamolybdate (see August 20, 2002 Office Action at page 3).

Thus, of all the cited references of record in the present application, only Thulliez discloses LOI values at all, achieving at best a value of 38%. (See Thulliez, Table at

columns 7-8). Thulliez provides no additional teaching regarding LOI values or even flame retardancy in general beyond simply listing LOI values in the table. Ellsworth mentions the possibility of adding flame retardants to the disclosed compositions (see Ellsworth at column 8, line 7), but provides no further disclosure as to the formation of a composition that includes a fluoropolymeric base polymer and a nanoclay additive and in which the composition has an LOI in the range recited in the applicants' claims, namely, 45.5% to 62%. In fact, Ellsworth discloses no LOI values at all. Similarly, Kutnyak mentions the possibility of improving flammability characteristics through the use of certain additives, but provides no teaching or suggestion with regard to LOI values (see Kutnyak at column 2, lines 41-46). In fact, Kutnyak relates only to polymer compositions per se, and provides no disclosure, suggestion or motivation to include nanoclay additives in its the disclosed compositions. None of the other cited prior art references, namely, Sibilia, Beall, Kawasumi, Vaia and/or Day, provides any teaching whatsoever as to flame retardancy or the improvement thereof.

Absent any disclosure, teaching or suggestion of flame retardant, fluoropolymeric compositions having a limiting oxygen index in the range of 45.5% to 62%, the cited references, alone

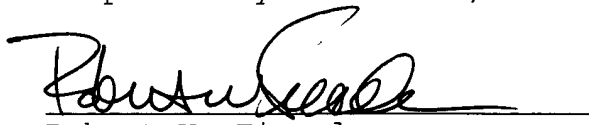
or in combination, cannot render claims 1-24, as amended herein, unpatentable for obviousness.

\* \* \* \* \*

In view of the foregoing amendments and remarks, applicants submit that claims 1-24 are allowable. The Examiner is invited to telephone the applicants' undersigned attorney at (312) 775-8123 if any unresolved matters remain.

A Petition for Three-Month Extension of Time accompanies this submission, along with the requisite fee for extension within the third month. Please charge any additional fees, and credit any overpayment, incurred in connection with this submission to Deposit Account No. 13-0017.

Respectfully submitted,

  
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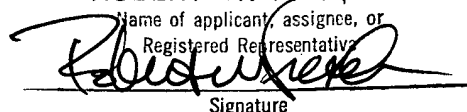
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